

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. The original filing indicated that the square-bracketed cross-referencing numbers are not to be regarded as part of the claims, thus such square-bracketed cross-referencing material has been removed in the below claims listing:

CLAIMS LISTING (all of submitted claims 1-22)

Claim 1 (Original): An isolation providing method comprising:

- (a) defining a first oxidation stop layer above a first conductively-doped semiconductor layer;
- (b) providing a first intrinsic silicon layer on the first oxidation stop layer;
- (c) oxidizing at least a sublayer portion of the first intrinsic silicon layer so as to thereby create a corresponding and thermally-grown, first intrinsic silicon oxide sublayer over the first semiconductor layer; and
- (d) disposing a second conductively-doped semiconductor layer above the first intrinsic silicon oxide sublayer so that the first intrinsic silicon oxide sublayer provides isolation between the first and second conductively-doped semiconductor layers.

Claim 2 (Original): The isolation providing method of Claim 1 wherein:

- (c.1) said thermally-grown, first intrinsic silicon oxide sublayer includes stoichiometric silicon dioxide (SiO_2).

Claim 3 (Original): The isolation providing method of Claim 1 wherein:

- (b.1) said providing of the first intrinsic silicon layer includes using atomic layer deposition (ALD) to define a thickness of the first intrinsic silicon layer.

Claim 4 (Original): The isolation providing method of Claim 3 wherein:

- (b.2) said thickness of the first intrinsic silicon layer is in a range of about 15 \AA to about 50 \AA .

Claim 5 (Original): The isolation providing method of Claim 4 wherein:

(a.1) said defining of the first oxidation stop layer includes creating a first silicon nitride composition having a nitrogen concentration of at least about 5% atomic.

Claim 6 (Original): The isolation providing method of Claim 5 wherein:

(a.1a) said first silicon nitride composition has a nitrogen concentration of at least about 10% atomic.

Claim 7 (Original): The isolation providing method of Claim 5 wherein:

(a.2) said creating of the first silicon nitride composition includes using Decoupled Plasma Nitridation (DPN) to introduce nitrogen into the first conductively-doped semiconductor layer.

Claim 8 (Original): The isolation providing method of Claim 5 wherein:

(a.2) said creating of the first silicon nitride composition includes using Remote Plasma Nitridation (RPN) to introduce nitrogen into the first conductively-doped semiconductor layer.

Claim 9 (Original): The isolation providing method of Claim 5 wherein:

(a.2) said creating of the first silicon nitride composition includes using ion implant to introduce nitrogen into the first conductively-doped semiconductor layer.

Claim 10 (Original): The isolation providing method of Claim 1 and further characterized by:

(c.1) continuing said oxidizing of the first intrinsic silicon layer at least until a corresponding first oxidation front crosses into the first oxidation stop layer so as to thereby perfect formation of silicon dioxide in the thermally-oxidized, first intrinsic silicon layer.

Claim 11 (Original): The isolation providing method of Claim 10 and further characterized by:

(c.2) continuing said oxidizing of the first intrinsic silicon layer yet further so as to consume silicon atoms within the first oxidation stop layer and so as to thereby produce additional silicon oxide from the consumed silicon atoms.

Claim 12 (Original): The isolation providing method of Claim 10 and further comprising:

(e) providing a silicon nitride layer between the first and second conductively-doped semiconductor layers so that the combination of the silicon nitride layer and the perfected silicon dioxide in the thermally-oxidized, first intrinsic silicon layer provide isolation between the first and second conductively-doped semiconductor layers.

Claim 13 (Original): The isolation providing method of Claim 12 and further comprising:

(f) providing a second silicon oxide layer between the silicon nitride layer and the second conductively-doped semiconductor layer so that the combination of the second silicon oxide layer, the silicon nitride layer and the perfected silicon dioxide in the thermally-oxidized, first intrinsic silicon layer provide isolation between the first and second conductively-doped semiconductor layers.

Claim 14 (Original): The isolation providing method of Claim 1 and further comprising:

(e) providing a silicon nitride layer between the first and second conductively-doped semiconductor layers so that the combination of the silicon nitride layer and the first intrinsic silicon oxide sublayer provide isolation between the first and second conductively-doped semiconductor layers.

Claim 15 (Original): The isolation providing method of Claim 14 and further comprising:

(f) providing a second silicon oxide layer between the silicon nitride layer and the second conductively-doped semiconductor layer so that the combination of the second silicon oxide layer, the silicon nitride layer and the first intrinsic silicon oxide sublayer provide isolation between the first and second conductively-doped semiconductor layers.

Claims 16-21 (Canceled).

Claim 22 (New): A method of forming insulation comprising:

(a) defining an oxidation stop layer above a first conductively-doped semiconductor layer;

(b) providing an essentially undoped semiconductor layer on the first oxidation stop layer;

(c) oxidizing at least a sublayer portion of the essentially undoped semiconductor layer so as to thereby create a corresponding, essentially undoped and thermally-grown, first oxide sublayer over the first conductively-doped semiconductor layer; and

(d) disposing a second conductively-doped semiconductor layer above the first oxide sublayer so that the first oxide sublayer provides electrical insulation between the first and second conductively-doped semiconductor layers.
